

# Health Services Support in Theater of Operations

## Introduction

Providing HSS (Health service support) while deployed in a theater of operations is an important flight surgeon mission. Flight surgeons must understand the workings of the HSS in order to perform effectively while deployed.

**After completing this lesson...**

### **You will be able to:**

- Define the six principles of health service support.
- Identify the modular medical support system.

### **You will be able to discuss:**

- The echelons (roles) of the combat health support system.

## Principles of HSS

### **Six principles of health service support:**

#### **Conformity**

- Conforming to the tactical plan is the most basic element for effectively providing health service support.
- Determine requirements.
- Plan the support needed to conform to tactical operations.
- Participate in the development.
- Conform to the Commanders intent.

#### **Proximity**

- Provide health service support to sick, injured, and wounded soldiers at the right time and to keep morbidity and mortality to a minimum.
- Employed far forward as the tactical situation permits.
- Early acquisition, sorting, and treatment
- Ensure treatment elements or medical treatment facilities (MTF) do not interfere with combat operations.

#### **Flexibility**

- The objective is to be prepared to shift HSS resources to meet changing requirements.
- Changes in tactical plans or operations make flexibility essential.
- Modular system
- Shift resources as required
- Reconstitute, reinforce

<b>Mobility</b>	<ul style="list-style-type: none"> <li>• The objective is to ensure HSS assets remain close enough to support maneuvering combat forces.</li> <li>• Mobility of medical units organic to maneuver elements should be equal to the forces being supported.</li> <li>• Patient accumulation.</li> </ul>
<b>Continuity</b>	<ul style="list-style-type: none"> <li>• The objective is to provide optimum care and treatment to the sick, injured, and wounded in an uninterrupted manner.</li> <li>• HSS is a continuum through a progressive, phased system.</li> <li>• Primary source of trained replacements</li> <li>• Optimize return to duty.</li> <li>• Each unit contributes a measured, logical increment appropriate to its location and capabilities.</li> </ul>
<b>Control</b>	<ul style="list-style-type: none"> <li>• The objective ensures efficient employment of scarce HSS resources to support the tactical and strategic plan.</li> <li>• One central medical planner</li> <li>• Centralized control and decentralized execution.</li> <li>• Scope and quality of medical treatment meet professional standards and policies.</li> </ul>

## **Modular Medical Support System**

### **What is the modular medical support system?**

- The modular medical support system standardizes all medical sub-units within the division providing HSS.
- The modular design of HSS enables the medical resources manager to rapidly tailor, augment, reinforce, or reconstitute the battlefield in areas of most critical need.
- This system acquires, receives, and sorts patients.

### **What sub-units are part of the modular medical support system?**

- Combat Medic
- Ambulance Squad
- Treatment Squad
- Area support squad
- Patient holding squad
- Area support section
- Forward surgical team (FST)

### **Combat Medic:**

- One combat medical specialist and their prescribed load of medical supplies and equipment
- Organic to the medical platoons/ sections of combat and selected combat support battalions

#### **Ambulance Squad:**

- Four medical specialist and two ground ambulances
- Provides evacuation of patients throughout the division and ensures continuity of care en route
- Organic to the medical platoon/ or medical company (BSMC (Brigade Support Medical Company)/ASMC (Area Support Medical Company))
- Located throughout the battlefield

#### **Treatment Squad:**

- 1 primary care physician
- 1 physician assistant (PA)
- 6 medical specialists with two emergency treatment vehicles and equipment
- Each squad can be split into two treatment teams
- The foundation for the battalion aid station (BAS)
- Squads or teams are organic to medical platoons / medical sections of combat and selected combat support battalions.

#### **Area support squad:**

- 1 dentist trained in advanced trauma management (ATM)
- 1 dental specialist
- 1 x-ray specialist
- 1 medical laboratory specialist
- Organic to the BSMC (Brigade Support Medical Company) and ASMC (Area Support Medical Company) in the brigade support area and division support area
- Incapable of independent operations

#### **Patient holding squad:**

- 2 practical nurses (enlisted soldiers)
- 2 medical specialists with associated equipment
- Capable of holding and providing minimal care for patients who will return to duty
- Light division squads can hold up to 20 patients, and the heavy division squads can hold up to 40 patients
- Organic to the BSMC (Brigade Support Medical Company) and ASMC (Area Support Medical Company) in the BSA and DSA
- Incapable of independent operations

**Area support section:** Composed of:

- 1 treatment squad
- 1 area support squad
- 1 patient holding squad
- Provides HSS on an area basis in the BSA and DSA
- Organic to the BSMC (Brigade Support Medical Company) and ASMC (Area Support Medical Company) in the BSA and DSA

**Forward surgical team (FST):**

- 10 Officers
- 10 Enlisted
- 2 operating room tables provide early resuscitative surgery for seriously wounded or injured casualties.
- Eight post surgical patient beds.
- Designed to treat 20 casualties within a 48-hour period.
- Not organic to a division (except Airborne/ Air Assault Divisions)
- Replacing the mobile army surgical hospital (MASH)

**Echelons**

**What are the echelons (roles) of the combat health support system?**

There are five echelons (levels) of combat health support exist that may have an impact on patients as they are treated or evacuated from the forward line of troops (FLOT) to the zone of interior (ZI).

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**Echelon I (Role I):**

- The first medical care a soldier receives is provided at this echelon.
- This echelon of care includes the following:
  1. Immediate lifesaving measures
  2. Disease and non-battle injury prevention
  3. Combat stress control prevention measures
  4. Casualty collection
  5. Evacuation from supported units to supporting medical treatment
- Treatment: Emphasis is placed on those measures necessary to stabilize and allow for the evacuation of the patient to the next echelon of care.
- Self-aid/ Buddy aid: Each soldier is trained to be proficient in a variety of specific first-aid procedures. These include aid for chemical casualties, with particular emphasis on lifesaving tasks.
- Combat lifesaver: A member of a non-medical unit selected by the unit commander for additional training beyond basic first aid procedures. A minimum of one individual per squad, crew, team or equivalent-sized unit should be trained

- many Commanders have a goal of 100% CLS qualification within the Unit. The combat lifesaver assists the combat medic by providing immediate care for injuries. Medical personnel provide training and assist the commander in managing the program.
- Combat medic (aid man): The first individual in the CHS chain who makes medically substantiated decisions based on a medical MOS training. The combat medic trains to emergency medical treatment (EMT) level.
- Battalion aid station: The physician and physician assistant in a treatment team or squad provide ATM or trauma treatment to the battlefield casualty. This element also conducts routine sick call when the situation permits.
- Multifunctional Medical Battalion (MMB): Provides role I care on an area basis for corps and echelons above corps (EAC) without organic medical assets

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### **Echelon II (Role II):**

- Evacuating patients from echelon I (role I).
- Treatment/ care at the BSMC (Brigade Support Medical Company) or ASMC (Area Support Medical Company)
- Provide echelon I care on an area basis.
- Provide tailgate medial support.
- Provide Dental care.
- Laboratory capability.
- X-ray capability.
- Patient holding capability (48 to 72 hours)
- Units providing Role II care (list not necessarily all inclusive):
  1. BSMC (Brigade Support Medical Company)
  2. ASMC (Area Support Medical Company)
  3. Multifunctional Medical Battalion (MMB): Provides role II care on an area basis for corps and echelons above corps (EAC) without organic medical assets

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### **Echelon III (Role III):**

- Evacuation of patients from supported divisional and non-divisional units
- Treatment for all categories of casualties in a medical treatment facility (MTF) with the proper staff and equipment
- Supports on an area basis to units without organic medical units
- First level you see a hospital
- Units providing Level III care: Combat support hospital (CSH)

### **Combat support hospital (CSH):**

- 296 bed combat zone hospital
- Stabilizes patients for further evacuation or RTD

- Treats all types of patients
- 15% mobile
- NOTE: MASH (30 bed hospitals) have been phased out

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**Echelon IV (Role IV):**

- General and specialized medical and surgical care
- Provides further treatment to stabilize those patients requiring evacuation to CONUS.
- Provides rehabilitation for soldiers who may be returned to duty.
- Units providing Role IV care: Echelons Above Corps (EAC) hospitals
  1. Field hospital
  2. General hospital

**Field hospital:**

- 504 bed capacity
- Recondition and rehabilitate patients who can RTD within theater evacuation policy
- 0% mobile (no organic vehicles, corps responsibility)

**General hospital:**

- 476 bed capacity
- Provide stabilization and hospitalization for patients who require either require further evacuation or who can RTD within the theater evacuation policy
- 0% mobile (no organic vehicles, corps responsibility)

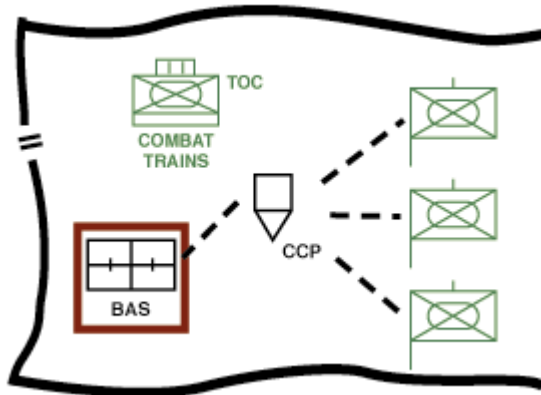
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**Echelon V (Role V) (Referred to as the Zone of Interior):**

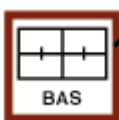
- Provides the most definitive care available with the Army Medical Department
- Health care services rendered in CONUS
- Hospitals include:
  1. MEDCENs
  2. MEDDACs
  3. Veterans Administration hospitals
  4. Designated civilian hospitals

**Levels of Care on the Linear Battlefield**

## Echelon I (Role 1): Battalion Area



- The first medical care a soldier receives is provided at this echelon.
- This echelon of care includes the following:
  - Immediate lifesaving measures
  - Disease and non-battle injury prevention
  - Combat stress control prevention measures
  - Casualty collection
  - Evacuation from supported units to supporting medical treatment
- **Treatment:** Emphasis is placed on those measures necessary to stabilize and allow for the evacuation of the patient to the next echelon of care.
- **Self-aid/ Buddy aid:** Each soldier is trained to be proficient in a variety of specific first-aid procedures. These include aid for chemical casualties, with particular emphasis on lifesaving tasks.
- **Combat lifesaver:** A member of a non-medical unit selected by the unit commander for additional training beyond basic first aid procedures. A minimum of one individual per squad, crew, team or equivalent-sized unit should be trained. The combat lifesaver assists the combat medic by providing immediate care for injuries. Medical personnel provide training and assist the commander in managing the program.
- **Combat medic (aid man):** The first individual in the CHS chain who makes medically substantiated decisions based on a medical MOS training. The combat medic trains to emergency medical treatment (EMT) level.



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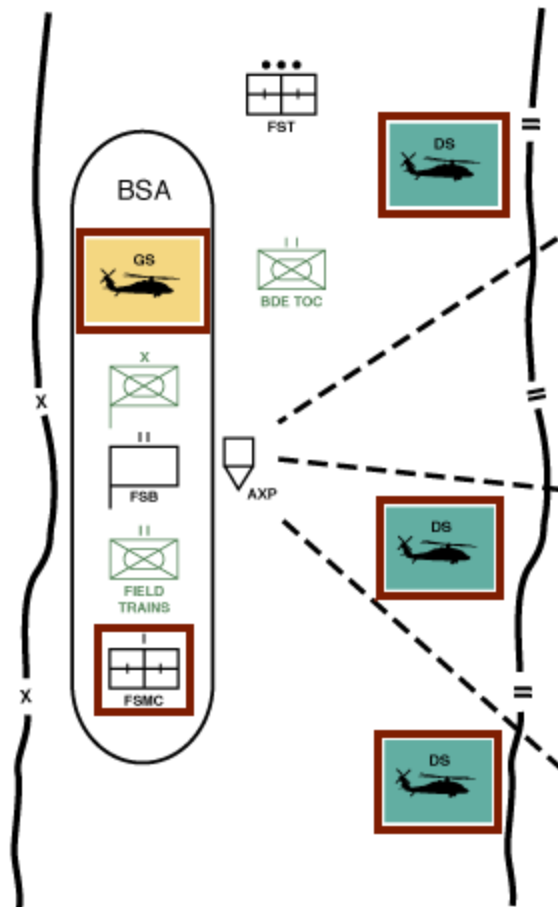


### **Battalion Aid Station:**

The physician and physician assistant in a treatment team or squad provide advanced trauma management (ATM) or trauma treatment to the battlefield casualty. This element also conducts routine sick call when the situation permits.

**Echelon II (Role 2):  
Brigade Support Area**





General Support Aircraft from Corps



Direct Support Aircraft from Corps

U.S. Army



### **UH-60A (Black Hawk)/HH-60L: US Army “MEDEVAC”**

- Range UH 60 approx 200 miles
- Electrical UH 60 : 115v 400hz
- Equipment: Portable suction/oxygen carried
- Life-Pak 10 / physiological monitor
- Organic Flight Medic assigned / augmented with additional medical capability.
- UH 60A: 6 litters or 6 ambulatory
- HH 60L: maximizes cabin space, normal configuration for 4 litter or 6 ambulatory; when required, two standardization agreement (STANAG) litters can be placed on the floor under forward lifts for a total of 6 patients.

### **Air ambulance patient-loading capabilities: UH-60A**

- 6 litter patients and 1 ambulatory patient, or 7 ambulatory patients or some combination thereof.
- Normal. Four litter patients and one ambulatory patient, or some combination.
- Total patient lift capability is 90 litter patients or 105 ambulatory patients, or some combination thereof.
- A flight medic provides in-flight medical treatment and surveillance for patients.

### **UH-72 Lakota**

- 2 litter
- Ambulatory to be determined



### **Forward Support Medical Company**

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### **Forward Support Medical Company (FSMC):**

The FSMC, an Army of Excellence (AOE) designed unit is organized to provide triage and

management of mass casualties, advanced trauma management (ATM), initial resuscitation and stabilization, care for patients with DNBI, and battle wounded and injured Soldiers. The FSMC also provides intervention for combat and operational stress disorders to include COSR and preparation of patients for further medical evacuation. The FSMC is organized into a company headquarters, a treatment platoon, an ambulance platoon, a PVNTMED section, and a BH section.

- Part of a brigade's Forward Support Battalion (FSB).
- Treats patients with minor diseases and illnesses, triage of mass casualties, initial resuscitation and stabilization, advanced trauma management, and preparation for further evacuation of patients incapable of returning to duty.
- Provides ground evacuation for patients from battalion aid stations and designated collection points.
- Provides emergency dental care.
- Provides emergency medical resupply to units in the brigade area.
- Medical laboratory and radiology services commensurate with division-level treatment.
- Outpatient consultation services for patients referred from unit-level MTFs.
- Patient holding for up to 40 patients able to return to duty within 72 hours.
- Coordination with the Unit Ministry Team (UMT) for required religious support.

### **BSMC (Brigade Support Medical Company)**

The new BSMC is designed to support the modular BCT. The BOA for the BSMC is one per maneuver brigade supported. The mission of the BSMC is to provide HSS to all BCT units operating within the brigade AO. The BSMC locates and establishes its company headquarters and also operates a Role 2 MTF and may operate Role 1 MTFs on an area support basis for units that do not have organic medical assets. The company provides C2 for its organic and attached/operational control (OPCON) medical augmentation elements. The BSMC may be augmented with a forward surgical team (FST) providing the company surgical capability, see FM 4-02.25. The BSMC is organized into a company headquarters, a PVNTMED section, a BH section, a treatment platoon, and an evacuation platoon

### **Echelon II (Role 2): Division Support Area (DSA)**

### **AREA SUPPORT MEDICAL COMPANY**

The ASMC performs functions similar to those of the BCT medical companies. The ASMCs are employed primarily in support of division, corps, and echelons above corps

(EAC) units. They are deployed to a geographical area to provide area HSS, or may be deployed to provide HSS for designated units. The ASMC also establishes its Role 2 MTF in a secure location centrally located for supported units. Medical treatment squads/teams of the ASMC may be deployed to establish Role 1 MTF and provide HSS support to concentrations of nondivisional units that do not have organic medical capabilities. The ASMC is organized into a company headquarters, a treatment and ambulance platoon, and a BH section

### **MULTIFUNCTIONAL MEDICAL BATTALION**

The mission of the MMB is to provide a scalable, flexible and modular C2, administrative assistance, logistical support, and technical supervision capability for assigned and attached medical organizations (companies, detachments, and teams) task-organized for support of deployed forces. The MMB is employed in the MDE BDE or MEDCOM AO. The basis of allocation (BOA) is one per three to six subordinate company-size units plus the blood detachment. It is composed of early entry and campaign elements.

### **GENERAL SUPPORT AVIATION BATTALION**

The mission of the general support aviation battalion (GSAB) is to provide the combat aviation brigade with aerial sustainment and maneuver support. The GASB is comprised of a HQ Company, Command Aviation Company, Heavy helicopter company, Aviation Traffic Services (ATS) Company, Med Company Air Ambulance, Aviation Maintenance and Forward Support Company. The GASB is organic to the division combat aviation brigade, theater assault aviation brigade, theater general support aviation brigade, and the Army National Guard (ARNG) aviation expeditionary brigade with a basis of allocation of one per division combat aviation brigade, one per ARNG aviation expeditionary brigade, one per theater assault aviation brigade, and three per theater. The GSAB mission includes aeromedical evacuation encompassing patient evacuation, patient movement between MTFs (patient transfers), Class VIII resupply, Joint blood program support, Medical C2, Movement of medical personnel and medical equipment and air crash rescue support.

### **MEDICAL COMPANY, AIR AMBULANCE (HH-60), GENERAL SUPPORT AVIATION BATTALION, COMBAT AVIATION BRIGADE OPERATIONAL INFORMATION**

The medical company, air ambulance provides aeromedical evacuation for all categories of patients consistent with evacuation precedence and other operational considerations within the division. In today's ongoing efforts in building a modular force, medical company, air ambulance will fall under the GSAB which will provide aircraft maintenance and logistics support, aviation

communications, and real-time operational picture associated with today's combat environment.

### **MISSION**

The mission of the medical company, air ambulance (HH-60) is to provide air ambulance evacuation support within the division and theater.

### **ASSIGNMENT**

The medical company, air ambulance, (HH-60) is organic to the GSAB for C2.

### **EMPLOYMENT**

This unit is employed in the division and corps area of responsibility. It is tactically located where it can best control its assets and execute its patient evacuation mission.

The BOA is one per GSAB and two per theater of operations

### **CAPABILITIES**

At Level I, this unit provides—

Fifteen helicopter ambulances to evacuate critically wounded or other patients consistent with

evacuation priorities and operational considerations, from points as far forward as possible, to

division, corps, and EAC hospitals. Single patient lift capability for the company is 72 litter

patients or 84 ambulatory patients, or some combination thereof.

(note: standard 15 aircraft per Unit was changed to 12 per Unit on institution of the GSAB, returning to 15 per Unit in 2009)

Four forward support medical evacuation teams (three helicopters each) that can be deployed as a team or an independent aircraft.

Air crash rescue support.

Expeditious delivery of whole blood, biological, and medical supplies to meet critical requirements.

Rapid movement of medical personnel and accompanying equipment/supplies to meet the requirements for mass casualty (MASCAL), reinforcement/reconstitution, or emergency situations.

Movement of patients between hospitals, ASFs, hospital ships, casualty receiving and treatment ships, seaports and railheads in the theater of operations.

Military working dog evacuation and aeromedical evacuation support to a combat search and rescue

Composition:

The four forward support MEDEVAC teams (FSMTs) provide a task-organized means for medical evacuation at the direct support (DS) and general support (GS) level. They also, provide emergency movement of medical personnel and emergency delivery of whole blood, biological, and medical supplies and equipment



#### Expeditionary Medical Systems (EMEDS) - Basic



#### Expeditionary Medical Systems (EMEDS) - Basic

- Replaces the Air Transportable Hospital concept
- Initial package 4 beds (SPEAR)
- **EMEDS Basic:** Provides 24-hour sick call, emergency medical treatment, trauma resuscitation and stabilization, limited general and orthopedic surgery. Also provides critical care, primary care, aeromedical evacuation coordination, aerospace medicine, dental and limited ancillary services.
- Holding capability less than 24 hours.



#### Mobile Aeromedical Staging Facility

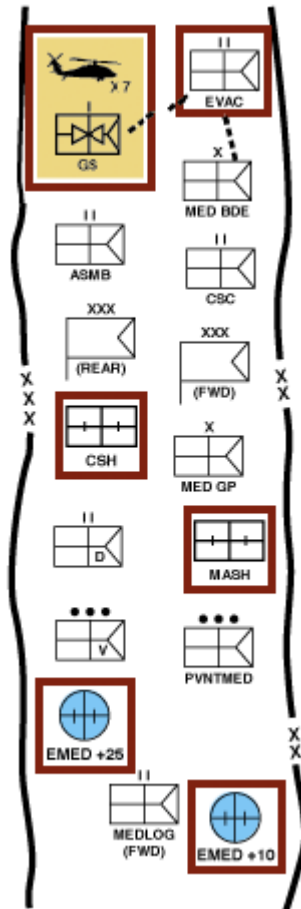


### **Mobile Aeromedical Staging Facility (MASF)**

The MASF is a 13-person, mobile, tented, temporary staging facility deployed to provide supportive patient care and administration. Each MASF is capable of a throughput of 40 patients per 24 hours and should be able to sustain this tempo for 72 hours before augmentation is required and is not intended to hold patients overnight or for an extended period.

- Located near runways or taxiways or forward air heads or operating bases by tactical airlift aircraft.
- Supports the tactical interface between service medical treatment facilities and the AE system with basic nursing support only.
- Provide 2-6 hour holding capability for patients entering the AE system. (No organic beds – only uses litter patient arrives on).
- Requires administrative and logistical support from supporting bases or service agencies.

### Echelon III (Role 3): Corps Area



- Evacuation of patients from supported divisional and non-divisional units.
- Treatment for all categories of casualties in a medical treatment facility (MTF) with the proper staff and equipment.
- Supports on an area basis to units without organic medical units.
- Most forward level with a hospital.
- **Units providing Role III care:**
  1. Mobile army surgical hospital (MASH)
  2. Combat support hospital (CSH)





### **Expeditionary Medical System + 25 beds**



### **U.S Air Force Expeditionary Medical System + 25 beds**

- Provide EMEDS basic and 10 beds plus
- Trauma surgical resuscitation and stabilization – 20 major procedures or 20 non-operative trauma resuscitations in 72 hours.
- Limited general and orthopedic urgent procedures.
- Patient transport – 2 ambulances assigned.
- **Core infrastructure specialty**
  - Critical care
  - Gynecology
  - Otolaryngology
  - Neurosurgery
  - Oral surgery
  - Ophthalmology
  - Thoracic vascular surgery
  - Urology
  - Mental health
  - Combat stress

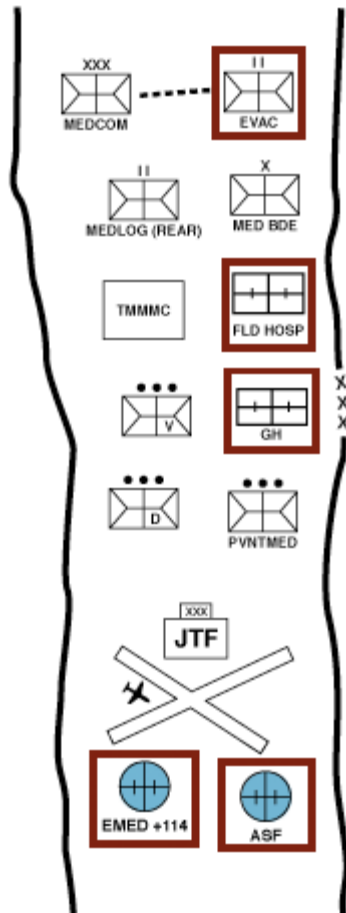


### **Expeditionary Medical System + 10 Beds**



**U.S Air Force**  
**Expeditionary Medical System + 10 Beds**

- Provide EMEDS basic capabilities plus:
- Critical care – postoperative and non-surgical
- Mental Health – basic
- Blood banking – up to 30 units PRBC
- Surgery – non urgent procedures
- Urgent care – acute care non-life threatening
- Patient transport – One ambulance assigned
- Patient evacuation – preparation for evacuation
- Ancillary services – Pharmacy/lab/radiology
- Clinical support – Telemedicine
- Aerospace medicine



#### Echelon IV (Level 4): Communication Zone (COMMZ)



#### Medical Evacuation Battalion Composition

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#### Medical Evacuation Battalion Composition:

A combination of three to seven of the following units:

- Medical company, air ambulance.

- Medical company, ground ambulance.
- Medical detachment, air ambulance.

### **Medical Evacuation Battalion mission:**

- Provide command and control of air and ground medical evacuation units within the Theater of Operations (TO).
- Tactically locate in the area where it can be in control of subordinate air and ground ambulance companies.
- The Evac Bn is designed to focus on command and control, planning, patient evacuation, and vehicle management.



### **Field Hospital**



### **Field Hospital**

- 504 bed capacity.
- Recondition and rehabilitate patients who can RTD within theater evacuation policy.
- 0% mobile (no organic vehicles, corps responsibility).



### **General Hospital**



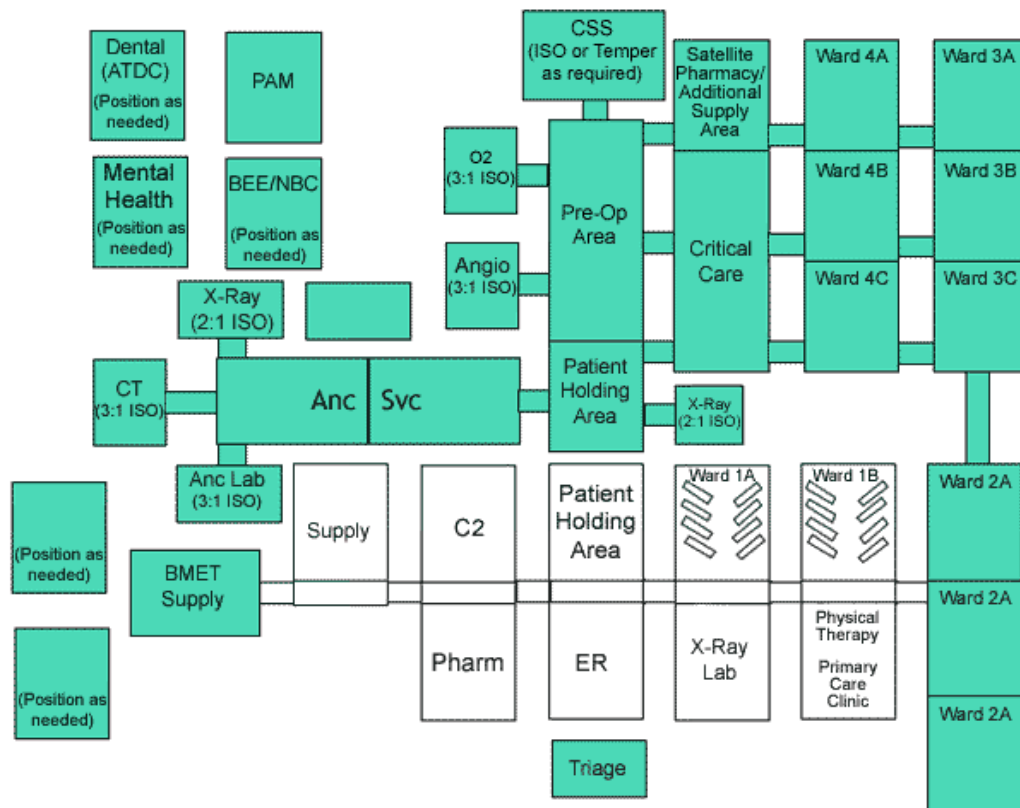
## General Hospital

- 476 bed capacity.
- Provide stabilization and hospitalization for patients who require either require further evacuation or who can RTD within the theater evacuation policy.
- 0% mobile (no organic vehicles, corps responsibility).



## U.S. Air Force Expeditionary Medical System + 114 beds

EMEDS +114 Configuration



- Provide EMEDS and 100 beds plus

- Trauma surgical resuscitation and stabilization – 20 major procedures or 20 non-operative trauma resuscitations in 72 hours.
- Limited general and orthopedic urgent procedures.
- Patient transport – 2 ambulances assigned.

#### **Core infrastructure specialties:**

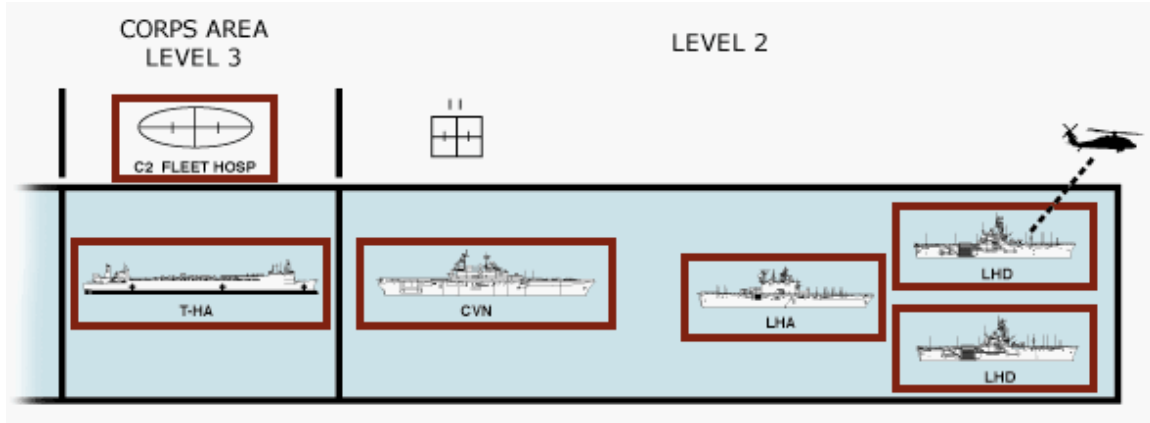
- Critical care
- Gynecology
- Otolaryngology
- Neurosurgery
- Oral surgery
- Ophthalmology
- Thoracic vascular surgery
- Urology
- Mental health
- Combat stress



#### **Aeromedical Staging Facility (ASF)**

- Up to 250 beds
- Provides support and continuity of medical and nursing care to patients traveling in the AE system.
- Fixed facility linked with a medical treatment facility.

## United States Navy and United States Marine Corps Health Service Support



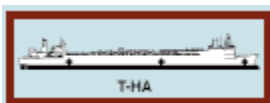
### Combat Zone Fleet Hospital

U.S. Navy



### Combat Zone Fleet Hospital

- 250 - 500 Beds
- 3 Operating room
- Modular concept, pre-positioned



### Hospital Ship (T-AH): USS Comfort and USS Mercy

U.S. Military Sealift Command



### Hospital Ship (T-AH): USS Comfort and USS Mercy

- 1000 Beds
- 12 Operating room
- Helicopter landing capability
- 2 Oxygen producing plants



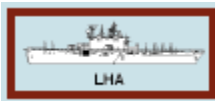
**Aircraft Carrier (CV or CVN)**

U.S. Navy



**Aircraft Carrier (CV or CVN)**

- 68 Beds
- 1 Operating room
- Helicopter landing capability



U.S. Navy / U.S. Marine Corps



**Amphibious Assault Ship (LHA)**

- 367 Beds
- Helicopter landing capability





U.S. Navy / U.S. Marine Corps



### **Amphibious Assault Ship (LPH)**

- 220 Beds
- 2 Operating rooms
- Helicopter landing capability



U.S. Navy / U.S. Marine Corps



### **Amphibious Assault Ship (LHD)**

- 604 Beds
- 6 Operating rooms
- Helicopter landing capability